

In the claims:

The claims being examined, including amended and original claims, are shown below.

1. (currently amended) A NO_x removal composition suitable for reducing NO_x emissions during catalyst regeneration in a fluid catalytic cracking process, said composition comprising (i) an acidic oxide support, (ii) cerium oxide, (iii) at least one oxide of a lanthanide series element other than cerium oxide, and (iv), optionally, at least one oxide of a transition metal selected from Groups Ib and IIB of the Periodic Table and mixtures thereof.

2. (original) The composition of claim 1 wherein said acidic oxide support is selected from the group consisting of alumina and silica-alumina.

3. (currently amended) The composition of claim 2 wherein said acidic oxide support is alumina.

4. (original) The composition of claim 2 wherein said acidic oxide support is silica-alumina.

5. (original) The composition of claim 4 wherein said silica alumina has an alumina:silica mole ratio of from about 1:1 up to about 50:1.

6. (original) The composition of claim 4 wherein the said silica-alumina is prepared by caustic leaching of silica from calcined kaolin.

7. (original) The composition of claim 4 wherein the said silica-alumina is prepared by the caustic leaching of silica from kaolin calcined through its characteristic exotherm.

8. (original) The composition of claim 7 where the caustic leached kaolin support is a microsphere whereby the caustic leached kaolin is bound with aluminum chlorohydroxide before calcination through its characteristic exotherm.

9. (original) The composition of claim 1 wherein said Group Ib and IIb transition metals are selected from the group consisting of copper, silver, zinc and mixtures thereof.

10. (original) The composition of claim 1 wherein said cerium oxide is present in amounts of from at least about 0.5 part by weight per 100 parts by weight of said acidic oxide support.

11. (original) The composition of claim 1 wherein said at least one oxide of a lanthanide series element other than cerium oxide is present in amounts of at least about 0.5 part by weight per 100 parts by weight of said acidic oxide support.

12. (original) The composition of claim 1 wherein said cerium oxide is present in amounts of from at least about 2 up to about 25 parts by weight per 100 parts by weight of said acidic oxide support.

13. (original) The composition of claim 1 wherein said at least one oxide of a lanthanide series element other than cerium oxide is present in amounts of from at least about 2 up to about 25 parts by weight per 100 parts by weight of said acidic oxide support.

14. (currently amended) The composition of claim 1 wherein said oxide of a lanthanide series element other than cerium oxide is praseodymium oxide.

15. (original) The composition of claim 14 wherein the amount of ceria to praseodymium oxide ranges from about 1:4 to about 4:1 by weight.

16. (original) The composition of claim 14 wherein the amount of ceria to praseodymium oxide ranges from about 1:2 to about 2:1 by weight.

17. (currently amended) A fluid cracking catalyst composition comprising (a) a cracking component suitable for catalyzing the cracking of hydrocarbons, and (b) a NO_x reduction composition comprising (i) an acidic oxide support, (ii) cerium oxide, (iii) at least one oxide of a lanthanide series element other than ceria, and (iv), optionally, an oxide of a transition metal selected from Groups Ib and IIB of the Periodic Table, said NO_x reduction composition being an integral component of the catalyst composition particles, being separate particles from the catalyst component or mixtures thereof and being present in the cracking catalyst in a sufficient NO_x reducing amount.

18. (original) The cracking catalyst of claim 17 wherein said cracking catalyst comprises an admixture of component (a) and component (b).

19. (currently amended) The cracking catalyst of claim 17 wherein said cracking catalyst comprises integral particles which contain both ~~components~~ component (a) and component (b).

20. (original) The cracking catalyst of claim 17 wherein the NO_x reduction composition (b) comprises about 0.1 to 15 wt % of the cracking catalyst composition.

21. (original) The cracking catalyst of claim 17 wherein said oxide of a lanthanide series element other than ceria is praseodymium oxide.

22-29. (non-elected)